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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/996,149	Applicant(s) GETTEMY ET AL.	
	Examiner Ke Xiao	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-11, 13-16, 18, 19, 21, 22 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghassabian (US 7,020,270) in view of Katsura (US 6,377,324).

Regarding independent **Claim 1**, Ghassabian teaches a display system, detachable from a host device (Ghassabian, Figs. 16, 20, Col. 26 lines 14-29), the display system comprising:

a power source (Ghassabian, Figs. 16-17 element 1604, Col. 26 lines 29-36);

a processor coupled to the power source (Ghassabian, Figs. 16-17, Col. 29 lines 14-25);

a memory coupled to the power source and the processor (Ghassabian, Figs. 16-17, Col. 29 lines 14-25);

a transceiver coupled to the processor (Ghassabian, Figs. 16-17, Col. 26 lines 14-29, specifically Ghassabian teaches that the communication between the display and the host device may be wireless meaning that the display system must inherently have a transceiver coupled to the processor);

a flexible electronic display coupled to the processor and the power source, the flexible display being configured in more than two sections, each section being foldable behind another section, such that whatever sections are viewable to a user are the display area being used by the host device (Ghassabian, Figs. 16-17);

a coupler for coupling the flexible electronic display to the host device (Ghassabian, Figs. 16D-16E); and

wherein the transceiver receives information from the host device when the display is decoupled from the coupler, and images are provided on the display based on the information (Ghassabian, Figs. 16-17, Col. 26 lines 14-29, specifically Ghassabian teaches that the communication between the display and the host device may be wireless meaning that the display need not be coupled to the host device in order to receive information on what to display); and

wherein during use of the flexible electronic display each section folded behind another section is not exposed when the flexible electronic display is coupled to the host device (Ghassabian, Figs. 16-17).

Ghassabian fails to teach a flexible touch sensor movable with the flexible electronic display. Katsura teaches a flexible touch sensor movable with a flexible electronic display (Katsura, Fig. 1, Col. 3 lines 45-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to add the flexible touch sensor to the flexible display of Ghassabian in order to provide a more intuitive input means to the computer system of Ghassabian.

Regarding independent **Claim 7**, Ghassabian teaches a portable electronic device (Ghassabian, Fig. 16), comprising:

- a housing (Ghassabian, Fig. 16);
- a coupler connected to the housing (Ghassabian, Fig. 16D and 16E); and
- a flexible display screen assembly, the flexible display screen assembly having a first viewing area providing images that are viewable by a user when coupled to the coupler and expandable to provide a larger viewing area, at least when decoupled from the coupler (Ghassabian, Fig. 16A-16E), the flexible display screen assembly including,
 - a power source (Ghassabian, Figs. 16-17 element 1604, Col. 26 lines 29-36);
 - a processor coupled to the power source (Ghassabian, Figs. 16-17, Col. 29 lines 14-25);
 - a memory coupled to the power source and the processor (Ghassabian, Figs. 16-17, Col. 29 lines 14-25);
 - a flexible electronic display coupled to the processor and the power source, the flexible display being configured in more than two sections, each section being foldable behind another section, such that whatever sections are viewable to a user are the display area being used by the portable electronic device (Ghassabian, Fig. 16-17); and
 - wherein during use of the flexible electronic display, each section folded behind another section is not exposed when the flexible electronic display is coupled to the host device (Ghassabian, Fig. 16-17).

Ghassabian fails to teach a flexible touch sensor as claimed. Katsura teaches a flexible touch sensor movable with the flexible electronic display, providing an enlarged

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touch sensor area when the viewing area of the flexible display screen assembly is enlarged (Katsura, Fig. 1, Col. 3 lines 45-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to add the flexible touch sensor to the flexible display of Ghassabian in order to provide a more intuitive input means to the computer system of Ghassabian.

Regarding independent **Claim 13**, Ghassabian teaches a foldable display assembly, comprising:

- a power source (Ghassabian, Figs. 16-17 element 1604, Col. 26 lines 29-36);

- a processor coupled to the power source (Ghassabian, Figs. 16-17, Col. 29 lines 14-25);

- a memory coupled to the power source (Ghassabian, Figs. 16-17, Col. 29 lines 14-25);

- a transceiver coupled to the processor (Ghassabian, Fig. 16-17, Col. 26 lines 14-29 wireless technology);

- a foldable electronic display coupled to the processor and the power source, the foldable display being configured in more than two sections, each section being foldable behind another section, such that whatever sections are viewable to a user are the display area being used by the host device (Ghassabian, Fig. 16-17);

- a coupler for coupling the foldable electronic display to the host device (Ghassabian, Fig. 16D and 16E); and

wherein the transceiver receives information from the host device when the display is decoupled from the coupler, and images are provided on the display based on the information (Ghassabian, Fig. 16-17, Col. 26 lines 14-29 wireless technology); and

wherein during use of the foldable electronic display, each section folded behind another section is not exposed when the foldable electronic display is coupled to the host device (Ghassabian, Figs. 16-17).

Ghassabian fails to teach a foldable touch sensor as claimed. Katsura teaches a foldable touch sensor foldable with the foldable electronic display (Katsura, Fig. 1, Col. 3 lines 45-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to add the flexible touch sensor to the flexible display of Ghassabian in order to provide a more intuitive input means to the computer system of Ghassabian.

Regarding independent **Claim 18**, Ghassabian teaches a handheld computer comprising:

a housing (Ghassabian, Fig. 16);

an expandable display assembly supported on the housing, providing a first viewing area and providing a second viewing area substantially the same size as the first viewing area, the first viewing area foldable underneath the second viewing area (Ghassabian, Figs. 16-17); and

wherein a user may view images on the second viewing area when the display assembly is folded and on the combined first and second viewing areas when the display assembly is unfolded (Ghassabian, Fig. 16-17); and

wherein images are not displayed on the first viewing area when the display assembly is folded and images are displayed on the second viewing area (Ghassabian, Fig. 16-17).

Ghassabian fails to teach a flexible touch sensor as claimed. Katsura teaches a flexible touch sensor associated with an expandable display, the sensing area of the touch sensor being enlarged when the expandable display is unfolded (Katsura, Fig. 1 Col. 3 lines 45-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to add the flexible touch sensor to the flexible display of Ghassabian in order to provide a more intuitive input means to the computer system of Ghassabian.

Regarding **Claim 24**, Ghassabian teaches a method of using a handheld computer, comprising:

viewing an image on a first viewing area of a flexible display, the flexible display comprising the first viewing area and a second viewing area folded behind the first viewing area, wherein images are not displayed on the second viewing area when folded behind the first viewing area (Ghassabian, Figs. 16-17);

enlarging the flexible display, by unfolding, to provide an enlarged viewing area comprising the first and second viewing area (Ghassabian, Figs. 16-17);

viewing an image in the enlarged viewing area (Ghassabian, Figs. 16-17).

Ghassabian fails to teach providing input via first and second sensing areas as claimed. Katsura teaches providing input to the handheld computer via a first sensing area of a touch sensor associated with the first viewing area of a flexible display; and

providing input to the handheld computer via a second sensing area of the touch sensor comprising the first sensing area and associated with the enlarged viewing area of the flexible display, the second sensing area being larger than the first sensing area (Katsura, Fig. 1, Col. 3 lines 45-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to add the flexible touch sensor to the flexible display of Ghassabian in order to provide a more intuitive input means to the computer system of Ghassabian.

Regarding **Claims 2, 8, 14 and 19** Ghassabian in view of Katsura further teaches that the flexible electronic display is electronic paper (e-paper) (Ghassabian, Figs. 16b and 16c, Col. 27 lines 20-34).

Regarding **Claims 3 and 9** Ghassabian in view of Katsura further teaches that the flexible display is foldable (Ghassabian, Figs. 16-17).

Regarding **Claims 4, 10, 15, 21 and 25** Ghassabian in view of Katsura further teaches that the host device is a handheld computer (Ghassabian, Figs. 16-17, Col. 26 lines 62-67).

Regarding **Claims 5, 11, 16 and 22** Ghassabian in view of Katsura inherently teaches that the flexible and foldable touch sensor includes a transparent coating. To elaborate in order for the touch sensor to operate as an integral part of an LCD display (Katsura, Col. 3 lines 45-50) it must inherently include a transparent coating in order to allow light to pass through.

- Regarding **Claims 26 and 27**, Ghassabian in view of Katsura fail to teach providing input using a fingertip or a stylus but merely teaches that a touching action is

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needed (Katsura, Col. 5 lines 12-20). Since the applicant has failed to disclose that a fingertip or a stylus for touching the touch sensor provides an advantage, is used for a particular purpose, or solves a stated problem, it is an obvious matter of design choice to use a fingertip or a stylus to touch the touch panel. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a fingertip or stylus to provide the input because any touch tool would have been just as effective at activating the touch sensor.

Claims 6, 12, 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghassabian (US 7,020,270) in view of Katsura (US 6,377,324) as applied to Claims 1-5, 7-11, 13-16, 18, 19, 21, 22 and 24-27 above, and further in view of Charlier (US 2003/0064751).

Regarding **Claims 6, 12, 17 and 23**, Ghassabian in view of Katsura fail to teach that the flexible and foldable touch sensor includes an electrotextile. Charlier teaches that it is well known in the art to use electro textiles in touch panels and keypads (Charlier, Pg. 2 paragraph [0029]). It would have been obvious to one of ordinary skill in the art at the time of the invention to use electro textile material as taught by Charlier in the touch sensor of Ghassabian in view of Katsura in order to prevent damage to the sensor during folding.

Response to Arguments

Applicant's arguments with respect to Claims 1-19 and 21-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ke Xiao whose telephone number is (571) 272-7776. The examiner can normally be reached on Monday through Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

October 25th, 2006 - kx -


SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER